

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended)

Method for determining at least one characteristic of a molten metal (4), by means of a measuring device (8) for generating measurement data of this characteristic, and a processing device (7) arranged outside of the molten metal, for processing these measurement data, whereby the measuring device (8) is introduced into the molten metal (4), ~~characterized in that~~ wherein a transmission antenna (14) integrated into the measuring device (8) is arranged at least partly above a slag layer (27) that is arranged on top of the molten metal (4), when the measuring device (8) floats in the molten metal (4), and wherein the measurement data are directly transmitted from the measuring device (8) to the processing device (7), in wireless manner.

2. (currently amended)

Method according to claim 1, ~~characterized in that~~ wherein the measuring device (8) is introduced into the molten metal (4) from a drop station (6).

3. (currently amended)

Method according to claim 1, wherein at least one of the above claims, characterized in that the method is carried out automatically.

4. (currently amended)

Method according to claim 1, wherein at least one of the above claims, characterized in that the measurement data are transmitted in the wavelength range of the ISM bands.

5. (currently amended)

Device (3) for determining at least one characteristic of a molten metal (4), having a measuring device (8), by means of which measurement data of this characteristic can be generated, and a processing device (7) arranged outside of the molten metal, by means of which these measurement data can be processed, whereby the measuring device (8) can be introduced into the molten metal (4) to perform a measurement, ~~characterized in that wherein the measuring device (8) has an integrated transmission antenna (14), which is arranged at least partly above a slag layer (27) that is located on top of the molten metal (4), when the measuring device (8) floats in the molten metal (4), and wherein~~ the measurement data are directly transmitted from the measuring device (8) to the processing device (7), in wireless manner.

6. (currently amended)

Device according to claim 5, ~~characterized in that~~

wherein the measuring device (8) has an integrated transmission antenna (14), which is arranged at least partly above a slag layer (27) that is located on top of the molten metal (4), when the measuring device (8) floats in the molten metal (4).

7. (currently amended)

Device according to claim 6, ~~characterized in that~~
wherein the transmission antenna (14) is mantled by a coating (18).

8. (currently amended)

Device (3) according to claim 7, ~~characterized in that~~
wherein the measuring device (8) can be introduced into the molten metal (4) from a drop station (6).

9. (currently amended)

Device (3) according to the above claim, ~~characterized in that~~ wherein several measuring devices (8) can be magazined in the drop station (6).

10. (canceled)

11. (currently amended)

Measuring device (8) for being introduced into molten metal (4) and generating measurement data of at least one characteristic of the molten metal (4), ~~characterized in that~~
wherein a transmission antenna (14) integrated into the measuring device (8) is arranged at least partly above a slag layer (27)

that is located on top of the molten metal (4), when the
measuring device (8) floats in the molten metal (4), and wherein
the measurement data can be directly transmitted from the
measuring device (8) to a processing device (7) that is located
outside the molten metal (4), for processing of these measurement
data, in wireless manner.